

RECOMMENDATION - 8 March 1963

13. Strengthening Technical Capabilities. The Board recommends that top priority be given to the creation, organization and exploitation of new resources of science and technology for use in intelligence activities.

Except in limited fields, of which photographic reconnaissance is one, we have merely scratched the surface in exploiting the use of science and technology for intelligence purposes.

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To move ahead with an adequate program, the Board proposes the following:

(a) "The creation of an organization for research and development which will couple research (basic science) done outside the intelligence community, both overt and covert, with development and engineering conducted within intelligence agencies, particularly the CIA. Institutional research, academic and industrial, must be joined to mission-oriented research."

(b) "The installation of an administrative arrangement in the CIA whereby the whole spectrum of modern science and technology can be brought into contact with major programs and projects of the Agency. The present fragmentation and compartmentation of research and development in CIA severely inhibits this function."

(c) "The clear vesting of these broadened responsibilities in the top technical official of the Central Intelligence Agency, operating at the level of Deputy Director. (Recasting and extending the Central Intelligence Agency's present Office of Research may accomplish this. If it does not, alternative administrative arrangements must be devised.) This technical official as we conceive his responsibilities, should have reporting to him the following groups, each managed by a competent technical leader:

(1) Technical Requirements Group, to generate and review the technical needs of the whole CIA operation (close coordination with the Defense Intelligence Agency is implied).

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(2) Systems Engineering Group, constantly to examine technical requirements as to feasibility, cost and values, in the light of evolving knowledge and discovery. *SPS*

(3) Development Group, to undertake execution of suitable, approved, systems plans. (Contracting for components, assemblies, and equipment might be a preferred mode, but this is different from the "project management" so often used now.) *Industry*

(4) Field Engineering Services Group, to aid operational elements in installation, use and maintenance of new facilities. A quality control regime should be instituted to follow reliability and other performance of equipment.

(5) Behavioral Sciences Group, to augment classic roles of psychology and medicine in intelligence planning and operations. For example, professional anthropology, programmed teaching and learning, and audio and visual perception might be covered. (Programmed instruction *Note above items not limited to collection*)

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(d) Formation of a few special research and development groups that may be part of a natural science division, probably coordinated with the behavioral sciences group, that cross-connects various classic disciplines in ways of primary importance to intelligence.

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(e) Actions within the Department of Defense: (1) to emphasize research in advanced sensing systems, advanced photographic systems, and in other sophisticated areas of intelligence gathering and (2) to strengthen advanced research in the signals intelligence field, particularly to prepare for the environment in which signals intelligence must function over the course of the next ten years. *Drell C"11 Cdn ELINT*

The importance of intelligence warrants a major effort to draw fully upon the most advanced science and the best scientific brains in the nation. Our scientific intelligence should be so sophisticated and advanced that it will be beyond the capabilities, if not the imagination, of our adversaries.

RESPONSE - 15 April 1963

Since becoming Director of Central Intelligence I have given top priority to "the creation, organization and exploitation of new resources of science and technology for use in intelligence activities." I have also expressed to the Board my concern at what appeared to be "fragmentation and compartmentation" of the scientific and technical assets of the CIA. There are two ways to approach this problem: complete merger, or overall staff direction at the level of the DD/R with operating units in the DD/P and DD/I.

In a major reorganization of CIA's technical and scientific activities (paragraph /a/ in Recommendation), I created a new Deputy Directorate for Research with three new offices under it: the Office of Special Activities to handle our U-2, satellite and advanced operations; the Office of ELINT to centralise and expand the electronic intelligence activities; and the Office of Research and Development to create new techniques for intelligence collection.

In addition, I considered the addition to the DD/R of the Office of Scientific Intelligence from the DD/I and the Technical Services Division from the DD/P, but upon strong staff advice suspended action on this for a period of observation. That period has now elapsed and I will move ahead with additional changes, starting with an intra-Agency board for staff direction of the scientific and technical effort, and giving the DD/R expanded responsibilities (paragraphs /b/ and /c/ in Recommendation).

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In this connection, I believe an explanation of certain CIA activities are in order as there seems to be some tendency to equate all scientific and technical personnel in CIA with research and development. The DD/R, as presently composed, will concentrate largely on advanced technology and the research and development to support it. Thus far this is primarily in the overhead reconnaissance and ELINT fields, but, as the Office of Research and Development is organized, may broaden into other fields.

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human agent. The Office of Communications in the DD/S is concerned with advanced technology in its field, but does not engage in any extensive research and development on its own. The Office of Scientific Intelligence in the DD/I is now exclusively an intelligence analysis office, the ELINT responsibilities having been transferred to the DD/R.

The specific proposals of the Board in this Recommendation are of considerable interest, particularly inasmuch as I had asked the Board to look at the CIA scientific and technical setup and make recommendations. While we have not had time to make a detailed review of the proposals, I would note that the creation of groups in the five areas mentioned--Technical Requirements, Systems Engineering, Development, Field Engineering Services and Behavioral Sciences--would require extensive reorganization throughout the Agency even beyond that contemplated above. It will be given comprehensive study.

*Steel
Lear
Shelley*

The objectives of cross-connecting the various classic disciplines in ways of primary importance to intelligence missions, the emphasis on advanced sensing and photographic systems and other sophisticated areas of intelligence gathering, and advanced research in signals intelligence are all ones of great importance and will be pursued vigorously.

I have brought into CIA a new Assistant Director for Scientific Intelligence, and am actively recruiting a number of highly qualified scientific and technical personnel.

Two panels were created to advise us on special problems--one on Audio Surveillance and the Roddis Panel on Chinese nuclear energy capabilities. These two groups were composed of highly qualified men from outside the Government. I am establishing a top-level Scientific Advisory Board to give me the benefit of the best brains in this field.

In addition, as I told the Killian Board, I am having the papers drawn up for a new organization for the collection and processing of information on Soviet missile systems, and have discussed this with the Secretary of Defense.

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